COPY FOR MR. J. ALLAN ROSS

HYDRO-ELECTRIC INQUIRY COMMISSION

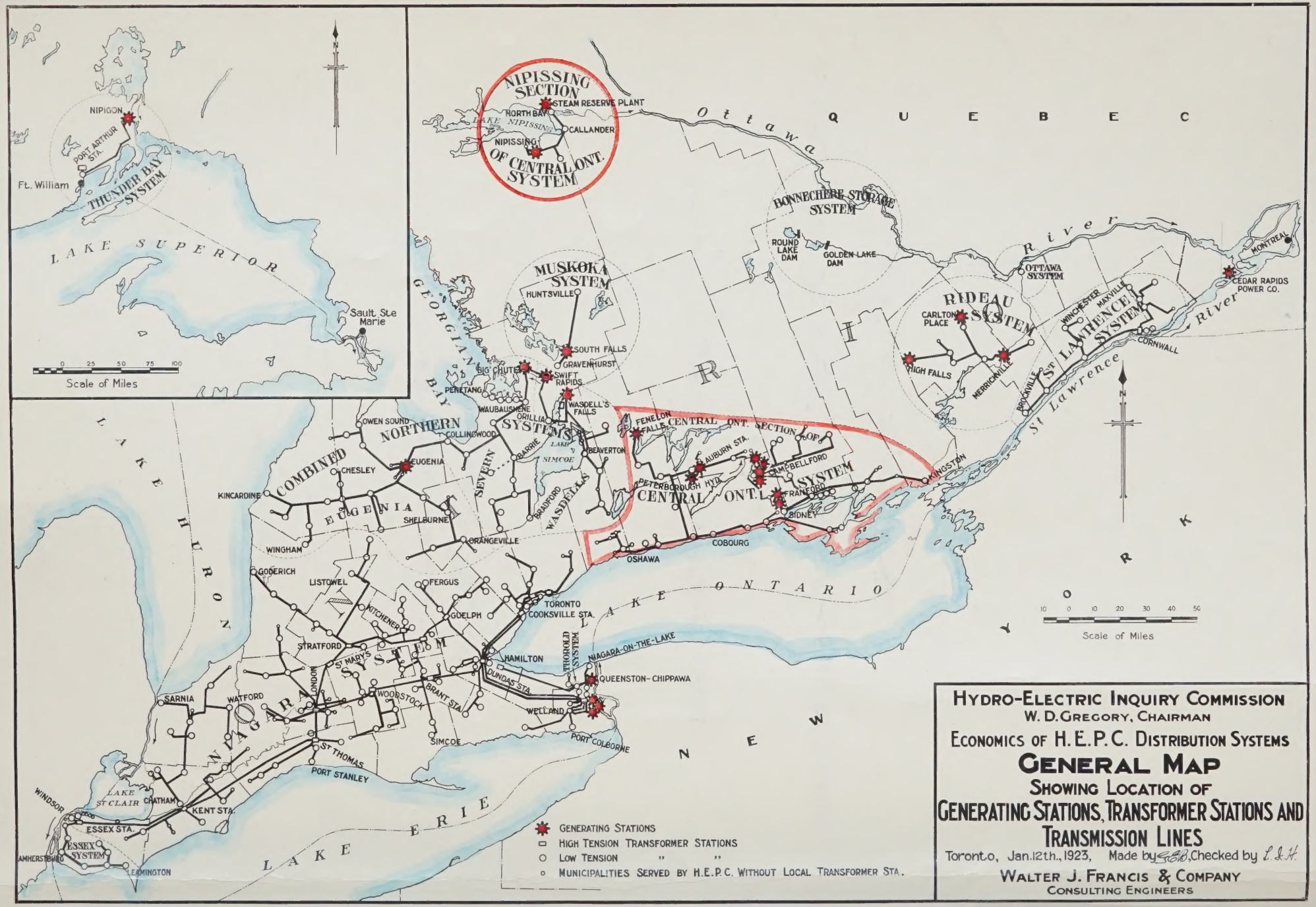
GENERAL REPORT

CENTRAL ONTARIO SYSTEM

JOSEPH H. W. BOWER
SECRETARY

Rosso

CENTRAL ONTARIO SYSTEM


HYDRO-ELECTRIC INQUIRY COMMISSION
W. D. GREGORY, CHAIRMAN
ECONOMICS OF H.E.P.C. DISTRIBUTION SYSTEMS
GENERAL MAP
SHOWING LOCATION OF
GENERATING STATIONS, TRANSFORMER STATIONS AND TRANSMISSION LINES
Toronto, Jan.12th., 1923, Made by G.S.B., Checked by L.S.H.
WALTER J. FRANCIS & COMPANY
CONSULTING ENGINEERS
GENERATING STATIONS
HIGH TENSION TRANSFORMER STATIONS
LOW TENSION " "
MUNICIPALITIES SERVED BY H.E.P.C. WITHOUT LOCAL TRANSFORMER STA.
Scale of Miles
NIPIGON
PORT ARTHUR STA.
Ft. William
THUNDER BAY SYSTEM
LAKE SUPERIOR
Sault Ste Marie
NIPISSING SECTION OF CENTRAL ONT. SYSTEM
STEAM RESERVE PLANT
NORTH BAY
CALLANDER
NIPISSING
LAKE NIPISSING
Ottawa
QUEBEC
BONNECHERE STORAGE SYSTEM
ROUND LAKE DAM
GOLDEN LAKE DAM
MUSKOKA SYSTEM
HUNTSVILLE
SOUTH FALLS
GRAVENHURST
BIG CHUTE
SWIFT RAPIDS
PERETANG
WAUBAUSHENE
ORILLIA
WASDELL'S FALLS
BEAVERTON
GEORGIAN BAY
LAKE HURON
OWEN SOUND
NORTHERN SYSTEM
COLLINGWOOD
COMBINED
CHESLEY
EUGENIA
KINCARDINE
EUGENIA
SHELBURNE
WINGHAM
GODERICH
LISTOWEL
ORANGEVILLE
BARRIE
SEVERN
BRADFORD
WASDELLAS
LAKE SIMCOE
FENELON FALLS
CENTRAL ONT. SECTION OF CENTRAL ONT. SYSTEM
AUBURN STA.
PETERBOROUGH HYD.
Mc BELLFORD
FRANKFORD
SIDNEY
KINGSTON
COBOURG
OSHAWA
LAKE ONTARIO
TORONTO
COOKSVILLE STA.
FERGUS
GUELPH
KITCHENER
STRATFORD
ST MARYS
LONDON
NIAGARA SYSTEM
HAMILTON
DUNDAS STA.
THOROLD SYSTEM
NIAGARA-ON-THE-LAKE
QUEENSTON-CHIPPAWA
WELLAND
PORT COLBORNE
SARNIA
WATFORD
WOODSTOCK
BRANT STA.
SIMCOE
ST THOMAS
PORT STANLEY
WINDSOR
LAKE ST CLAIR
CHATHAM
KENT STA.
ESSEX STA.
ESSEX SYSTEM
AMHERSTBURG
LEAMINGTON
LAKE ERIE
NEW YORK
RIDEAU SYSTEM
CARLTON PLACE
HIGH FALLS
MERRICKVILLE
OTTAWA SYSTEM
BROCKVILLE
ST LAWRENCE SYSTEM
WINCHESTER
MANVILLE
CORNWALL
St Lawrence River
CEDAR RAPIDS POWER CO.
MONTREAL

General Map Showing Location of

Generating Stations, Transformer Stations and Transmission Lines

of the

Hydro Electric Power Commission of Ontario.

The area outlined in red shows the

Central Ontario System.

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ON THE

CENTRAL ONTARIO SYSTEM.

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TORONTO - ONTARIO.
January 25th, 1923.

Hydro Electric Inquiry Commission,
W. D. Gregory, Esq., Chairman,
TORONTO - ONTARIO.

RE GENERAL REPORT-CENTRAL ONTARIO SYSTEM.

Mr. Chairman and Gentlemen:

In accordance with instructions given on January 5th, a general report of the Central Ontario System has been made in accordance with the general plan approved of by the Commission on January 2nd. The work has been done under my direct personal supervision, in accordance with your instructions.

The reports of Messrs. Price, Waterhouse & Company, Messrs. Clarkson Gordon & Dilworth, and Walter J. Francis, Consulting Engineer, have been used in the preparation of the report, and in addition complete studies have been made of all evidence taken at the public hearing in connection with the system. The report falls naturally into two distinct parts. The first part includes sections entitled "Historical", "Physical", "General Economics", and General Relations", which sections are a recital of facts, together with explanatory matter. The second part entitled "Summary is in effect a series of my own personal deductions, and should be considered as such.

In reference to the first part of the report referred to above, it is pointed out that wherever use has been made of statements, figures or opinions, given in reports by the Auditors, or the Consulting Engineer, these have been carefully checked by the Auditors and the Consulting Engineer, and are completely concurred in by them.

The evidence and reports forming the basis of this report are appended hereto and in order to facilitate reference to the documents in question, on the right hand margin of the report throughout will be found abbreviated references.

Yours very truly,

J. W. Dawson.
SECRETARY.

JWD:KM.

CENTRAL ONTARIO SYSTEM

Historical Sketch

The Central Ontario System as a whole is the result of the gradual development of various undertakings, established largely on the initiative of the late Cecil B. Smith and his associates, J. G. G. Kerry and (Carol E. Chace?) by a number of independent companies which, from about the year 1900, acquired practically all available power sites in the district. W 2

The district served by this system is shown margined in red on the frontispiece.

In addition to generating and transmitting power, the companies operated other public utilities including water work systems, a number of gas plants, a street railway and a pulp mill. The companies finally became amalgamated under the control of the Electric Power Company, Ltd., the physical assets and franchises of which were purchased by the Ontario Government in March, 1916.

The files of the Hydro Electric Power Commission show that from the years 1906 to 1916 resolutions were forwarded by eighteen municipalities to the Commission asking for information or estimates covering the supply of energy by the Commission.

Sir William Hearst in his evidence stated that from 1911 representations were made to the Government from time to time by the people of Eastern Ontario urging the acquisition E. 1251

of the Electric Power Company, Ltd., so that the people would have the benefit of publicly owned power. The evidence of Mr. Howard Ferguson and Mr. McCarry confirms this and Mr. Strachan Johnston, President of the Electric Power Company, Ltd., stated that in 1911 there was a strong feeling for Hydro in Eastern Ontario. This feeling appears to have proceeded concurrently with the development of Hydro activities in Western Ontario. E. 1269 1429 2143

In January, 1912, the electors of the Municipality of Kingston voted in favour of obtaining power from the Commission and in the same year the Engineers of the Commission prepared a report on the services of the Electric Power Company, Ltd. F. 187a

In 1914, assent was given to an "Act respecting the City of Peterborough" which had been discussed by the Legislature at the two previous sessions. This Act authorized the City of Peterborough to take over the property of the Peterborough Light and Power Company, Ltd., a subsidiary of the Electric Power Company, Ltd. Statutes

In 1913, the Commission requested the Electric Power Company, Ltd., to quote on a supply of power for Peterborough, and a contract was entered into in October, 1914. F. 187a

Just what part the Commission took in creating a desire for Hydro in the minds of the people of Eastern Ontario is not clear, but the Commission had acted in an advisory capacity to certain municipalities and in 1911 approached the Federal Government for the purpose of leasing dams Nos. 4 and 6 on the Trent Valley Canal. A strong claim was made by the

Commission for the dams in question which was successfully opposed by the Electric Power Company, Ltd., and during this period the Minister of Railways and Canals suggested to the Chairman of the Commission that the Commission should purchase the property of the Electric Power Company, Ltd.; he also suggested to the President of the Electric Power Company, Ltd., that he should sell out the Company's interests. It was apparently realized that the entry of the Commission into the district would mean a duplication of plant and power lines and would jeopardize the undertakings already established. E. 1434

Shortly after the representations made at Ottawa the Commission carried on negotiations for the purchase of the Electric Power Company, Ltd., and arrangements were made whereby Sir Henry Drayton would act as valuator. At the first discussion before Sir Henry Drayton, Mr. Strachan Johnston took the position that it had been agreed that the valuation was to be final and binding on both parties, but members of the Government and Sir Adam Beck would not admit this understanding, taking the stand that a valuation could not be accepted as final, lacking enabling legislation and definite authority from the municipalities. Their opinion was that if the valuation was not agreed to by the municipalities, the municipalities would not be obliged to take over the properties from the Province. F. 177a p.56 59 60

As the negotiations on the part of the Commission failed, the matter was taken up directly by the Provincial Government, and an understanding was reached between Mr.G.Howard Ferguson and the President of the Electric Power Company, Ltd. E. 1271

The Chairman of the Commission was consulted and on the 4th March, 1916, made the following recommendation:

> "Referring to the Electric Power Company's interests in the Trent District, I would recommend that the Government offer the Electric Power Company, including all interests controlled by it, for all their physical assets (excluding the accounts receivable and payable) franchises, rights, interests, contracts, works, etc., as they existed on March 1st, 1916, and as added to since that date, the sum of $8,350,000.00 in 4% Government Bonds interest payable half-yearly. Bonds redeemable in fifty years, such Bonds shall provide for the deferring of the Sinking Fund for the first ten years." F. 177a p.63

The transaction was completed in April, 1916, by the passing of "The Central Ontario Power Act" which authorized the purchase of the physical assets and franchises of the Company for the sum of $8,350,000.00 in 4% Government Bonds redeemable in ten years, instead of fifty years as recommended. Sir Adam Beck in his evidence admitted that he knew the life of the Bonds had been changed. He said "I did not approve of it and I did not oppose it"; he stated that he was anxious to know what difference the change in the life of the Bonds would make, and learned from a friend that it would probably be a million dollars. Statutes. E. 1588 E. 1598

On May 5th, 1916, an Order-in-Council was passed authorizing the Commission to operate the System. It is quite clear that it was the intention of the Government that the Commission should operate the System, in so far as conditions would permit, in a manner similar to those systems operated under the Provisions of the Power Commission Act, and that eventually

the system would be brought into line with other municipal Hydro undertakings, and that the works acquired, other than electric services, would be disposed of as soon as favourable opportunities arose. To date only the Trenton Water Works and a flour mill known as the Smith Mill have been disposed of, and the gas plant at Napanee closed, while the Commission, with the approval of the Province, has purchased the Bruton Township pulpwood areas as a source of supply for the Campbellford Pulp Mill at a cost of $300,000.00 paid by Provincial debentures in the amount of $225,000.00 and balance in cash.

E. 1265 1295 1622 2159

P.W. Ex.IV

Since the System has been operated by the Commission the electric services have been extended until at present the System is supplying power in about thirty municipalities and townships, as compared with eighteen in 1916, as well as to a large number of individual consumers. The capacity of the generating stations has been increased from 22,400 h.p. to 56,400 h.p. the increase being provided by the construction of the Ramsey Falls plant of 10,000 h.p. and the extension to the Healey Falls plant, giving 4,000 additional horsepower. The transmission system has also been greatly extended.

W.J.F. p.5,8, 11.

Generally speaking the Commission has to date been able to keep pace with the ever increasing demand for power. In the years 1920 and 1921 trouble was experienced owing to a power shortage in the Trent District. This shortage was the

subject of a controversy between the Federal Government, which controls the waters, and the Commission, resulting in the appointment of two consulting engineers, Mr. Holgate, of Montreal, and Mr. J. B. McCrae, of Ottawa, who reported on the matter. [illegible] B. 1869

During almost seven years of operation by the Commission, no material advancement has been made in bringing the original municipalities to a Hydro basis.

COPY

PHYSICAL

The System comprises two distinct portions, one known as the Trent Section which extends from Whitby on the West to the City of Kingston on the East and from the Lake Ontario Waterfront northwards as far as Lindsay; the Nipissing Section supplies North Bay, Callandar, Powassan and Nipissing. W.J.F. p.6.

TRENT SECTION

The following remarks refer to the Trent Section:

Generating Stations:

The following table prepared by our Consulting Engineer gives details of the various generating stations in the Trent District as taken over at 1st of March, 1916, with extensions made to same up to the 31st October, 1922. The rating is in accordance with the practice of the Commission and is expressed in horsepower at 80% power factor. The rating of the Ranney's Falls plant is given as the average between the summer and winter power. W.J.F. p.5,8.

Location	Name	H.E.P.C. Developed Rating 1916	H.E.P.C. Developed Rating 1922
		H.P.	H.P.
Dam No. 2.	Trenton (Sidney)	4,000	4,000
No. 5.	Frankford	3,470	3,470
No. 10.	Ranney's Falls	-	10,000
No. 11.	Campbellford (Seymour)	4,000	4,000
No. 14.	Healey's Falls	8,000	12,000
No. 18.	Peterborough (Auburn)	2,000	2,000
No. 20.	Fenelon Falls	950	950

Undeveloped Power Sites

In addition to the developed power sites as indicated in the table above the System owns or controls a number of undeveloped power sites at various points which are detailed on Pages 9 and 10 in the Consulting Engineer's Report.

Transmission Lines

Our Consulting Engineer states with regard to transmission lines in the Trent District that on the 1st of March, 1916, there were in existence about 285 miles of high tension — wood poles transmission lines consisting for the most part of a 44,000 volt network with tie line from Coulson Falls to Lindsay operating at 11,000 volts and another tie line from Trenton to Frankford operating at 6,600 volts. Since 1916, the transmission system has been greatly extended until at the present time it consists of nearly 500 miles of lines. all on wood poles

W.J.F. p.11.

Transformer Stations

A table of transformer stations in the Trent District giving the capacity and voltage of each will be found on page 12 of the Consulting Engineer's Report.

Construction

The only construction work carried on by the Commission in addition to extensions of transmission lines and betterments to plants, was the construction of Hanney's Falls plant in the years 1920, 1921 and 1922, and extensions to

Healey Falls plant in the year 1919.

A map showing location of generating stations, transformer stations and transmission lines is shown on page 10.

NIPISSING SECTION

The following remarks apply to the Nipissing Section:

Generating Stations

There is in this section one generating station at Nipissing with a capacity of approximately 2,000 h.p. and a stand-by steam plant in North Bay of approximately 625 h.p. W.J.I. H.9.

There is an abandoned power house at Powassan.

Undeveloped Power Sites

The System owns or controls a number of undeveloped power sites which are detailed on page 10 in the Consulting Engineer's Report.

Transmission Lines

There are approximately 25 miles of 22,000 volt lines in this section. P.W. p.8.

Transformer Stations

These stations are located at North Bay, Powassan and Callandar.

Generating Stations

Transformer Stations Owned By Ontario Government

Municipalities served by H.E.P.C. Without Local Trans'r. Sta.

Note:-

Transmission Line Voltage shown thus 44,000

Hydro-Electric Inquiry Commission

W. D. Gregory, Chairman

Economics of H. E. P. C. Distribution Systems

Central Ontario System

Central Ontario Section

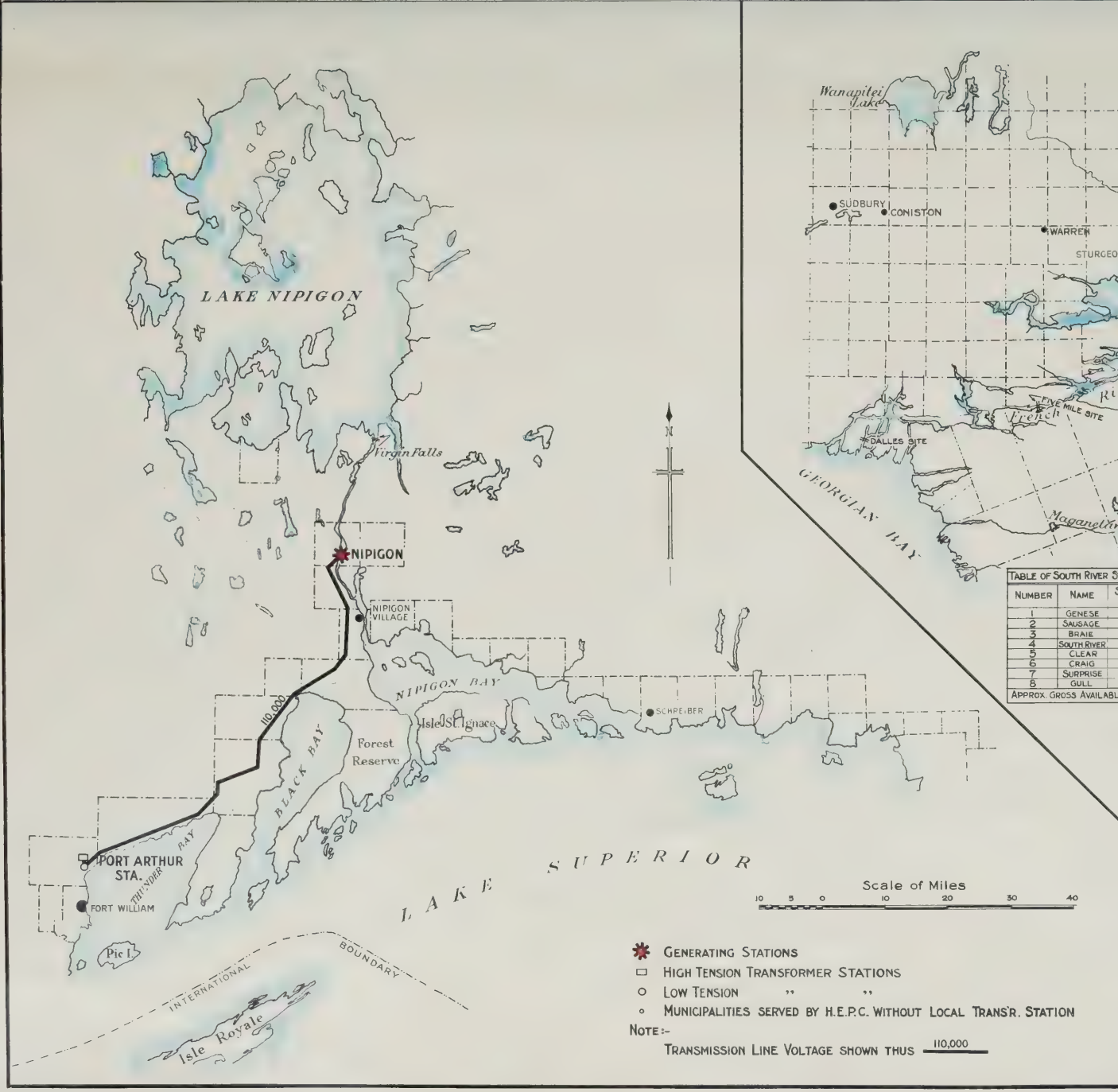
Map Showing Location of Generating Stations, Transformer Stations and Transmission Lines

Toronto, Jan 5th., 1923. Made by [illegible], Checked by L. L. N.

Walter J. Francis & Company

Consulting Engineers

A map showing location of generating stations, transformer stations and transmission lines is shown on page 12.



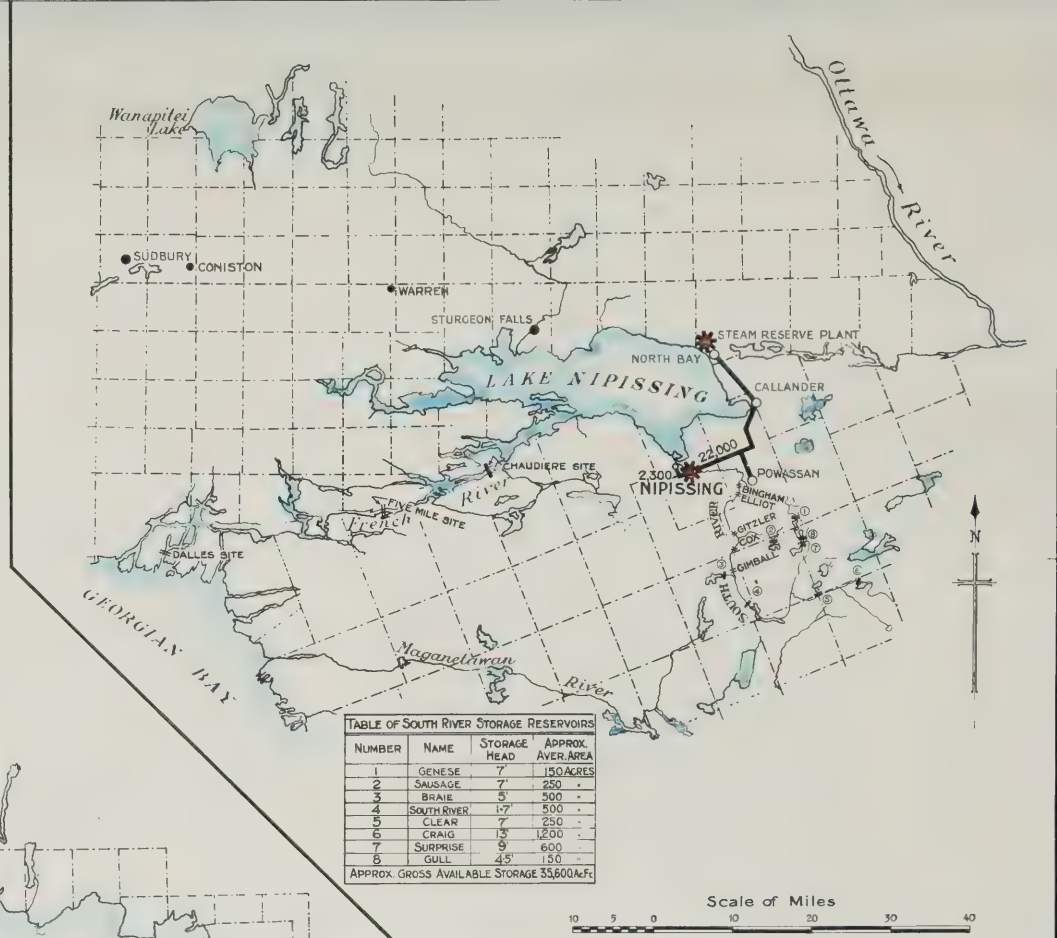


Table of South River Storage Reservoirs

Number	Name	Storage Head	Approx. Aver. Area
1	Genese	7'	150 Acres
2	Sausage	7'	250 "
3	Braie	5'	500 "
4	South River	1·7'	500 "
5	Clear	7'	250 "
6	Craig	13'	1,200 "
7	Surprise	9'	600 "
8	Gull	4·5'	150 "
Approx. Gross Available Storage 35,600 Ac.Ft.			

Hydro-Electric Inquiry Commission

W. D. Gregory, Chairman

Economics of H. E. P. C. Distribution Systems

Nipissing Section of Central Ontario System, and Thunder Bay System

Map Showing Location of Generating Stations, Transformer Stations and Transmission Lines

Toronto, Jan. 12th, 1923. Made by S.R.W. Checked by L.A.H.

Walter J. Francis & Compan
Consulting Engineers

GENERAL ECONOMICS

The following review of the general economics of the System is based on information obtained from the reports submitted by Messrs. Price, Waterhouse & Co., Auditors, Messrs. Clarkson, Gordon and Dilworth, Auditors, and Walter J. Francis, Esq., Consulting Engineer; together with evidence given at the public hearing held in connection with the System.

PURCHASE PRICE

The System was acquired by the Province of Ontario on March 1st, 1916, under authority conferred by "The Central Ontario Power Act", 1916, for the sum of $8,850,000.00 payable in ten-year debentures of the Province, bearing interest at 4½ per annum, the debentures maturing on the 1st day of March, 1926. Our Auditors estimate that the cash value of the debentures at date of issue was $7,705,206.22, this calculation being based on the assumption that debentures of like nature would yield 5%.

P.W. p.2.

P.W. lette

As already stated the original proposal was that fifty year debentures should be issued, our Auditors advise that changing the life of the debentures to ten years increased the purchase price by approximately $879,609.00.

P.W. lette

APPRAISAL OF PROPERTIES

The Engineers of the Commission appraised the physical assets of the Electric Power Company, Ltd., including certain water rights at September 30th, 1914, as follows:

	Replacement Value	Present Value	
Central Ontario Section	$5,046,088.00	$3,987,319.00	
Nipissing Section	383,665.00	298,596.00	
Stores & Spare Parts	160,891.00	120,666.00	H.E.P.C
Tools	7.767.00	3.884.00	Appraisa
T O T A L S -	$5,598,411.00	$4,410,465.00	

The replacement value of the capital assets as shown above was reduced by the Engineers of the Commission to $5,291,099.00 at the date the properties were taken over, which, together with the capital expenditures made by the Electric Power Company, Ltd., during the period from September 30th, 1914, to March 1st, 1916, aggregating $183,049.91, along with the value of tools and equipment and materials and spare parts as of March 1st, 1916, resulted in a total replacement value of $5,672,658.00. The difference of $2,677,342.00 making up the total purchase price was considered as intangibles, which were apportioned over the various properties on a more or less arbitrary basis. Following the acquisition of the properties the following values were recorded on the books of the Commission: P.W. p.25

	Replacement Value	Intangibles	T o t a l
Central Ontario Section	$5,065,992.91	$2,578,671.00	$7,644,663.91
Nipissing Section	408,156.00	98,671.00	506,827.00
Materials & Spare Parts	184,998.53	-	184,998.53
Tools	13,510.56	-	13,510.56
T O T A L S -	$5,672,658.00	$2,677,342.00	$8,350,000.00

PROVINCIAL INVESTMENT

Advances by the Province since the purchase and up to 31st October, 1922, amounting to the sum of $3,707,858.78 have been used for capital expenditures and working capital of the system, thus making the total investment by the Province $12,057,858.78, as at that date.

INVESTMENT IN CAPITAL ASSETS

The total investment in the capital assets at September 30th, 1922, was $12,203,630.49, made up as follows:-

Investment at March 1st, 1916, including intangibles, (but not materials and supplies in the amount of $184,998.53)	$8,165,001.47	P.M. p.25
Expenditures during period from March 1st, 1916, to September 30th, 1922	4,038,629.02	C.G.S. B. 194a S.1. H.A.I C.
Making a total investment as above to September 30th, 1922	$12,203,630.49	

The expenditures made by the Commission consisted of advances by the Province and reinvestment of reserve funds.

Losses representing the difference between the amount realized for property sold or scrapped and the book value thereof have been added to the intangibles. During the period from March 1st, 1916, to October 31st, 1921, the

intangibles were increased by $171,395.15, made up as follows:- P.W. p.25

Power developments	$132,265.39
Low tension lines	7,277.67
Sub-stations	14,751.09
Local electric systems	6,238.56
Nipissing section	9,184.70
Pulp Mill	1,677.74
T o t a l	$171,395.15

OPERATING RESULTS

The total loss up to October 31st, 1922, on all operations of the Central Ontario System, after providing for interest on the capital investment of the Province in the System and all other interest charges, and reserves in the following amounts: C.G.&D. Op.a/c S.1. P.W. pages 37,38, 39,40, 41,42, 43,10, 11. Ex.1,7 C.G.&D. Op.a/c S.1. R.E.P.C

For renewals about	$1,300,000.00
For sinking fund about	36,000.00
For contingencies about	15,000.00
	$1,351,000.00

was $207,167.98

The loss is made up as follows:-

LOSSES

Power Departments	$374,947.44	
Gas Works	108,430.62	
Cobourg Water Works	27,010.14	
Peterborough Radial Railway	130,450.52	
Nipissing Section	30,350.34	
Loss on sale of Trenton Water Works	2,270.64	
TOTAL LOSSES		$673,459.70

P.W. p.12

PROFITS

Local Electric Systems	$421,085.39	G.G.&E.
Trenton Water Works	3,816.57	Op.-a/
Campbellford Pulp Mills	41,389.76	S.1.
	$466,291.72	
NET LOSS from all operations up to October 31st, 1922	$207,167.98	

POWER DEPARTMENT AND
LOCAL ELECTRIC SYSTEMS

The district served by the System is both urban and rural and of varying character with regard to load.

Speaking broadly the total consumption of energy may be divided into three main groups:

(a) Private companies taking power at fixed rates; certain municipalities, including Kingston, taking power at fixed rates on wholesale basis. P.W. 3, 4.

(b) Nine municipalities buying power at cost on a wholesale basis.
Power taken by the townships of Whitby, East Whitby and Pickering at cost under the operation of the Oshawa Rural Line.

(c) Fifteen municipalities in which power is distributed retail by the Commission.

An analysis of these load classifications indicates that the first class uses from 25% to 30% of the total energy required; the second class is about the same, while the third class uses from 40% to 50% of the total energy. Thus, it is seen that a comparatively small amount of the energy sold is marketed on a cost basis, which shows that a decided difference exists in the operation of this system to Hydro systems in other parts of the Province. W.J.F p.18

Our Engineer gives it as his opinion that the Central Ontario System has a well-balanced general distribution system, the varying character of the loads permitting some diversity in distribution.

An analysis of the service rendered the Trent district shows that, out of a total population of about 140,000 persons, the total number of consumers was about 28,000 at the end of 1922. W.J.F. p.19

The revenue from the power sold under conditions detailed in (a), (b) and (c) together with profit and loss is shown by the following statement for the year ending October 31st, 1921: P.W. Ex. 9 Ex.19

	Revenue	Profit	Loss
Power sold under (a)	$252,230.05	-	$62,775.62
Power sold under (b)	139,232.01	-	-
Power sold under (c)	582,650.39	$84,516.21	-
	$974,112.45	$84,516.21	$62,775.62

Thus it will be seen that the revenue derived from Class (a) amounted to 26% of the whole, the revenue from Class (c) amounted to 60%, and the revenue from Class (b) which is the sale of power at cost and constitutes 25% to 30% of the energy consumed produced only 14% of the total revenue. Checking back the records for the period commencing November 1st, 1918, shows practically the same percentage results.

Dealing particularly with Class (c), the total profit on the local electric systems up to October 31st, 1922, has been ascertained as a whole, already given in the amount of $41,085.39. The results by individual municipalities for the fiscal year ending October 31st, 1922, have not yet been determined, but, in order to indicate the results of operations of these municipalities, the following is given showing the accumulated profit or loss for each, resulting in a net profit of $336,610.17 up to October 31st, 1921:

	Losses	Profits	
Belleville		$115,142.77	
Bowmanville	$1,355.45		
Brighton		2,808.47	
Cobourg		47,109.93	
Deseronto	738.90		
Lindsay		52,406.83	
Millbrook	320.24		
Napanee	4,441.64		
Newburgh	3,388.13		
Newcastle		1,057.07	
Orono		1,093.83	
Oshawa		79,274.52	
Port Hope		12,149.15	P.W.
Trenton		52,978.31	Ex.21
Tweed	6,992.25		
Peterborough (now on Hydro basis)	174.10		
	$17,410.71	$354,020.88	
		17,410.71	
Net profit on local electric systems to October 31st, 1921		$336,610.17	

It is interesting to note, in reviewing all charges making up the total cost of power for the system, that the percentage of same are approximately as follows:-

(1)	Operating costs, including power purchased	25%
(2)	Maintenance	10%
(3)	Overhead and general expenses	12%
(4)	Interest	35%
(5)	Renewal Reserve	15%
(6)	Contingencies	3%
		100%

INDUSTRIES AND LOCAL UTILITIES

Gas Works

Capital assets at September 30th, 1922:

Tangibles	$632,724.19
Intangibles	75,599.33
T o t a l	$708,323.52

The losses from the operation of the gas works by years are as follows:-

1 year and 8 months ending Oct.31,1917	$31,750.67	
Fiscal year ending October 31st, 1918	26,847.27	
Fiscal year ending October 31st, 1919	23,879.41	
Fiscal year ending October 31st, 1920	13,562.15	P.W.
Fiscal year ending October 31st, 1921	8,654.51	p.17
Fiscal year ending October 31st, 1922	3,756.61	C.G&D.
Total loss to October 31st, 1922 -	$108,430.62	Op.a/c
		S.1.

From the above it will be seen that the losses have decreased each year and it is not unreasonable to assume that the gas works will soon be self-sustaining. There has

been a general increase in revenue each year, up to October 31st, 1921, which in the main is due to increased rates and to increased consumption.

The loss sustained from the operation of the gas works up to October 31st, 1921, amounting to $104,674.01, by municipalities, is as follows:-

Cobourg	$35,385.79
Napanee	26,787.83
Oshawa	35,912.29
Peterborough	6,588.10
	$104,674.01

P.W. Ex.21

An analysis of the operations of these plants by Mr. Walter J. Francis is given in a graphical manner included as Page 61 of his report. A considerable sum was spent in betterments, the results of which, combined with changes in operating methods and rates, has decreased the annual deficit. It is to be noted that rates to consumers as a whole have been increased almost 100%. This, together with increased consumption, largely accounts for the fact that the system is approaching the point where yearly revenue will meet all charges. In considering the improved conditions it should be borne in mind that the accumulated deficit, $108,430.62 still remains.

P.W. Ex. 17 Ex.22

Water Works

While the Commission originally operated two water works systems, the system at Trenton was sold, at a loss of $2,270.64, to the town of Trenton on 1st January, 1919.

Capital assets at September 30th, 1922:

Tangibles	$231,731.45
Intangibles	41,611.88
T o t a l	$273,343.33

The operations of the Cobourg Water Works resulted in a loss, which, by years, is as follows:-

		Loss	Profit	
1 year and 8 months ending Oct.31,	1917	$7,704.09		
Fiscal year ending October 31st,	1918	8,543.01		
Fiscal year ending October 31st,	1919	8,429.94		
Fiscal year ending October 31st,	1920	1,133.49		
Fiscal year ending October 31st,	1921	1,973.16		
Fiscal year ending October 31st,	1922		$773.55	P.W. Ex.XI
		$27,783.69	$773.55	C.G.&D. Op.a/c
		773.55		S.1.
Net loss to October 31st, 1922		$27,010.14		

The improved results of operation is due largely to the expiration of a franchise on October 1st, 1919, which limited the rates chargeable up to that date. P.W. p.18

Mr. Francis shows in his report that while the present accumulated deficit amounts to approximately $27,000.00 the yearly operation of the undertaking has approached stability, and with a slight increase in rates the accumulated losses may eventually be overcome. W.J.F. p.64

Peterborough Radial Railway

Capital assets at September 30th, 1922:

Tangibles	$277,550.12
Intangibles	56,926.45
T o t a l	$334,476.57

The Peterborough Radial Railway, except for the period from 1st March, 1916, to 31st October, 1917, shows an increasing loss each year. Up to 31st October, 1922, the loss was $130,450.52, which by years is as follows:-

	Loss	Profit	
1 year and 8 months ending Oct.31,1917		$1,848.84	
Fiscal year ending October 31st, 1918	$12,323.41		
Fiscal year ending October 31st, 1919	26,062.86		F.W.
Fiscal year ending October 31st, 1920	26,663.74		p.18
Fiscal year ending October 31st, 1921	33,031.15		C.G.&D.
Fiscal year ending October 31st, 1922	34,218.20		Op.a/c
			s.1.
	$132,299.36	$1,848.84	
	1,848.84		
Net Loss	$130,450.52		

Up to 31st October, 1921, the revenue from the railway has increased each year and decreased in 1922, but the operating expenses have increased in relatively greater amounts. The increases in revenue are due to advances in the rates of fare throughout the period and also, for the years up to 1920, to increases in the number of passengers. Up to 1st December, 1920, the cash fare was five cents, since that date, a seven cent

cash fare has been in effect. The principal increases in the operating expenses are due to increases in wages also, in 1921, to an increase in cost of power. P.W. p.19.

Mr. Francis, in his review of the economics of operation states as follows:- "There is a possibility of making a better showing by the installation of about a dozen one-man cars, by lowering wages, and by the increase in the traffic as Peterborough continues to recover from the recent industrial depression, but it is doubtful if the railway can ever show revenues equal to the total costs." E.J.F. p.64 p.66

It is interesting to note that the accumulated deficits on this railway amount to more than one third of the capital investments.

Campbellford Pulp Mill

Capital assets at September 30th, 1922, (including Bruton pulpwood areas):

Tangibles	$484,541.22
Intangibles	21,641.74
T o t a l	$506,182.96

The operations of the Campbellford Pulp Mill up to 31st October, 1922, resulted in a profit of $41,389.76.

which by years is as follows:-

		Loss	Profit	
1 year and 8 months ending Oct.31,1917			$32,753.62	
Fiscal year ending October 31st,	1918	$14,869.89		
Fiscal year ending October 31st,	1919	77,080.85		
Fiscal year ending October 31st,	1920		189,869.25	F.W.
Fiscal year ending October 31st,	1921	17,695.84		p.20
Fiscal year ending October 31st,	1922	71,588.53		C.G&I
				Op.a/
		$181,233.11	$222,622.87	s.1.
			181,233.11	
Net profit for the period -			$ 41,389.76	

During the years 1918 and 1919 when the price of pulp ranged from $30.00 to $40.00 per ton losses were experienced. In 1920, the price rose to $100.00 per ton and a large profit was made; in 1921, the price fell to $25.00 per ton and operations were so unprofitable, owing to the price obtainable and a weak market, that the mill was closed in March and did not renew operations until September, 1922, when the market strengthened. F.W. p.21

Certain offers were made in 1921 covering the purchase of the pulp mill and Bruton Township lands. Our Auditors refer to the matter on page 22 of their report as follows: "On February 18, 1920, an option was given to Alexander J. McCumber of Port Arthur, Ontario, for the sale, subject to the approval of the Province, of the Campbellford Pulp Mill, Bruton Township Lands, Bancroft Mill and other property used in connection with the pulp wood operations. The purchase consideration named in the option was $475,000.00 payable $1,000.00 on February 18, 1920, $5,000.00 on March 18,

1920, $225,000.00 on April 19, 1920, and the balance on October 16, 1920.

Subsequently Meigs & Company claimed to have a verbal option on the property and the Government decided not to sell to either of the parties but to continue the operation or advertise for tenders.

The option given to A. J. McCombor had been registered and deposits made by him with the Commission on account of the purchase price. When it was decided to cancel the option a payment of $10,000.00 was made to J. J. Carrick representing A. J. McCombor to cover interest on the deposits and incidental expenses incurred. A complete release and quit claim was thereupon given." P.W. p.22.

The amount of $10,000.00 was charged into the cost of operations in the year 1921.

NIPISSING SECTION

While this section is included in the Central Ontario System, geographically it serves an entirely different section of the country and is not connected physically with the properties located in the Trent District. For this reason, while the total results of its operations are included in the general balance sheet, in detail its operations should be

considered separately.

Capital assets at September 30th, 1922:

Tangibles	$596,485.30
Intangibles	107,855.70
T o t a l	$704,341.00

There is an existing franchise with the municipality of North Bay limiting the rates chargeable for power; this municipality consumes approximately 90% of the total load of this section.

The following statement shows profit and loss of the section:-

	Loss	Profit	
1 year and 8 months ending Oct.31,1917	$ 1,929.36		
Fiscal year ending October 31st, 1918	15,648.63		
Fiscal year ending October 31st, 1919	1,089.53		
Fiscal year ending October 31st, 1920	10,179.71		
Fiscal year ending October 31st, 1921	6,803.90		F.W.
Fiscal year ending October 31st, 1922		$5,300.79	p.22
			C&D.
	$35,651.13	$5,300.79	op.a/
	5,300.79		S.1
Net loss to October 31st, 1922	$30,350.34		

The loss from the operation of this section fluctuates to a considerable extent in the same ratio as the cost of operating the steam plant, which is used as a stand-by. The cost of operating the steam plant for the years 1918

to 1921 was as follows:-

1918	$14,321.62	
1919	8,785.07	
1920	17,995.22	P.W.
1921	11,423.03	p.23.

Purchase Options

Certain municipalities have the option to purchase their local electric systems exclusive of intangible values. In the event of a municipality taking such action the price paid the Province would not include allowance for intangibles according to the terms of the franchises. The system would, therefore, be the poorer by the difference between a valuation which included intangibles and the valuation on which purchase was made. M. 100

The intangibles allocated to these local electric systems by the Commission at March 1st, 1916, are as follows:

Belleville	$25,830.00	
Bowmanville	7,609.00	
Deseronto	2,987.00	
Lindsay	12,493.00	
Millbrook	3,000.00	
Newcastle	1,474.00	
Orono	1,028.00	C.G.&D.
Port Hope	13,892.00	137a
	$68,263.00	S.2.

probably a revaluation now would disclose a value equal to, or nearly so original cost (value incl. intangible)

It might also be well to mention that the municipality of Lindsay has the option to purchase its power plant.

In any event, if the above local electric Systems were purchased by the municipalities the consideration would doubtless be determined by an appraisal as of the date on which the properties were taken over. In addition to the above, certain other municipalities have the option to take over their local electric systems at a valuation to be determined by arbitration in case the parties cannot agree upon a price, no reference in the franchise being made to intangibles, so that the Profit or Loss made on the sale of these systems would be entirely dependent upon the valuation made of the system by the arbitrators at the time of sale.

If the municipalities in which local electric systems are operated should take over the systems and operate them on a basis similar to municipalities in Western Ontario, the Central Ontario System would in the future lose the profits that are now being made thereon under the terms of the existing franchises made with the Electric Power Company, Ltd., and which resulted in an accumulated profit up to 31st October, 1922, of $421,085.39.

In order to overcome yearly losses of revenue that would be incurred in the future if such action were taken by these municipalities, the Hydro-Electric Power Commission would have to increase the wholesale rates for power to these municipalities, in excess of cost.

Reserve for Renewals

The establishment of the amount to be set aside for renewals is a matter of engineering judgment based on the useful length of life of the properties involved, consequently in considering reserves for renewals account only property that is actually depreciable is taken into consideration.

Trent Section

In respect to the Trent Section, our Consulting Engineer gives the opinion that the accumulated reserve fund, if augmented from year to year by the proper allowance compounded in the usual way, is large enough to replace the whole of that portion of the electric system which would eventually require renewal, when the following facts are taken into account:-

(1) That the useful life of the electric system without Ramney's Falls is probably less than one-half over;

(2) That the Ramney's Falls plant has only recently commenced operation;

(3) That there is a renewal amount on the books of something over $1,000,000.00 applicable to the electric system. E.J.F. p.53.

Nipissing Section

In respect to the Nipissing Section our Consulting Engineer states that, as there is a renewal account on the books of nearly $100,000.00 applicable to this section, it would appear that the accumulated renewal fund is larger than is

necessary to replace that portion of the section which would eventually require renewal, if the fund is augmented from year to year by the proper allowance compounded in the usual way. W.J.F. N.p.38

Messrs. Price, Waterhouse & Company show in a very detailed statement the method of arriving at renewal reserves on pages 37, 38 and 39 of their report and in Exhibits VI, VIa, VIb, attached thereto.

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Our Consulting Engineer points out that "During the past few months the various heads of departments of the Hydro Electric Power Commission of Ontario have been studying the question of depreciation rates and the proper allowance for useful length of life for each kind of equipment, and they have come to the conclusion that the rates formerly allowed have been too high; in other words the actual deterioration of the various parts of the System have not been so great as was expected, and they have prepared figures to show that their former practice was too conservative in allowing for estimated useful life. They have, therefore, suggested that the renewal allowances on a sinking fund basis be considerably reduced in the annual charges. If this suggestion be adopted it would have the effect of building up the reserve fund in future at a slower rate, and of correspondingly reducing the annual costs, and consequently reducing the total annual cost of power." W.J.F. N.p.38

Reserve for Contingencies

The reserve for contingencies amounting to $7,952.61 at October 31st, 1921, is considered inadequate by our Consulting Engineer who expresses the opinion that the reserve should be built up to say $50,000.00 or $75,000.00 for the Trent Section, and say $15,000.00 to $20,000.00 for the Nipissing Section, by increasing the rates of 25 cents per horsepower now charged as a part of operating costs. The following is a summary of the charges made against the reserve for the four years ending October 31st, 1921:- W.J.F. p.55 W.J.F. N.p.37

1918	$10,[illegible].61
1919	[illegible],821.15
1920	1,935.00
1921	50,764.49
	$46,279.65

P.W. p.42

It will, therefore, be noted from the above that should future expenditures be necessary in any year as was the case in 1921 a reserve of $7,952.61 would be entirely inadequate.

Sinking Funds

With regard to Sinking Funds, Mr. Clarkson in his audit report of the accounts of the Commission for the fiscal year ending October 31st, 1921, states as follows:

> "With the Central Ontario System owned by the Province of Ontario the operations of the System do not require to be conducted subject to the provisions of the Power Commission Act, and particularly Section 23 thereof. With this the case there is no obligation upon the Commission to establish sinking funds for the repayment of the investments of the Province

C.O.&D. p.71, 1921.

in or its advances to the System. There is equally, however, nothing to prevent the Commission establishing Sinking Funds in respect of the costs of any particular works of the System, if, in its opinion, it deems it advisable so to do."

Those municipalities with whom standard Hydro contracts have been made are required by the terms of their agreement under which they contract to take power at cost to provide an amount in respect of Sinking Fund charges, but to date the Commission have not included such amounts in the cost of power and the municipalities have, therefore, not acquired any proprietary interest in the properties.

The total investment in the properties of the Central Ontario System at October 31st, 1921, was $11,559,603.94 and sinking funds are being provided on a thirty-year basis in respect of $418,760.84 thereof, representing the investment in the Oshawa rural lines, the Bruton Township pulpwood areas, and the Bancroft mill. At October 31st, 1921, the accumulated sinking fund amounted to $28,665.54. These monies are not paid over to the Province, but are held for the requirements of the system. P.W. p.40

As previously indicated the system was purchased with ten-year debentures of the Province to mature in 1926, and no sinking fund has been set aside to retire these debentures. The question of refinancing the Central Ontario System will undoubtedly have to be carefully considered in the near future, and at that time the whole question of the provision of a sinking fund to retire the new debenture issue, or other method of financing, will undoubtedly be considered.

Investment of Reserve Funds

Reserve funds have been to a large extent reinvested in capital assets. In other words, the reserve funds which have not been used for renewals have been used to finance construction and to provide working capital, as will be seen from the following:-

On Central Ontario System up to Oct. 31st, 1921, reserve funds in the amount of $1,081,044.67

were provided and these funds have been used for the following purposes:-

Used to increase working capital (in addition to working capital provided by Province)	$144,674.83	
Loss from operation	168,930.15	
Invested in capital assets	767,439.69	P.W. p.27
	$1,081,044.67	

Had this practice not been followed, it would have been necessary for the Province to make additional advances in respect of construction, and the unused reserves would remain in liquid form.

Diversion of Appropriations

Of the cash advances made by the Province up to 31st October, 1920, the sum of $1,719,472.22 was used by the Commission to cover certain expenditures on other systems. This commenced as early as 1917 and continued year by year until the end of 1920. Mr. Clarkson, the Auditor, states in his evidence that he had at different times called this action

on the part of the Commission to the attention of the Commission and the Government, and that the matter was finally rectified by the repayment of all such funds to the Provincial Treasurer on October 31st, 1921, all necessary adjustments being made with respect to interest charges. E. p.1850

Interest

Interest has been charged the Central Ontario System for all monies used by it and paid to the Province of Ontario. Interest on monies used for construction of plant works, etc., has been capitalized during the period of construction only, while all other interest has been charged to operation.

Construction Policy

The only work of any magnitude undertaken by the Commission since the acquisition of the properties, was the construction of the Ranney's Falls Power Plant, situated at dam No. 10 on the Trent River, which was constructed during the years 1920, 1921 and 1922. It has an average working head of 54 feet and is rated by the Commission's Engineers as having an output at 80% power factor of about 9600 h.p. The total capital cost of the plant to October 31st, 1922, as given by the engineers of the Commission is $1,695,300.00, made up as

follows:-

Land and Water Rights	$37,800.00	
Dams and Water Structures	197,800.00	W.J.F.
Power House	567,850.00	p.30
Equipment	866,850.00	
Intangibles	25,000.00	
	$1,695,300.00	

Mr. Francis points out that the cost for dams and water structures, given above, does not include the cost of the Federal Government dams on the Trent River at this point, and that to get a true measure of the total capital cost, the cost of the Federal dams should be added to the above figures. There are also, it is understood, a few items of capital cost which have not yet been included in the above figures, but the exact amount of these has not been submitted at the present time.

As a means of comparing the cost of this plant with the others nearby on the Trent River, Mr. Francis has submitted the following table, which shows in brief form the relative capital cost per horsepower for each of the other six developed plants compared with Ranney's Falls:-

Table of Capital Costs per H.P. for Central Ontario Plants

	Head Feet	Year Built	Horse Power Rating (HEPC)	Capital Cost per h.p. (HEPC rating)	Capital cost per h.p. based on Turbine capacity	Remarks
renton	18.6	1911	4,000	$89.00	$64.00	Low head
rankford	17	1913	3,400	95.00	77.00	Low head
anney's Falls	54	1920-22	10,000	170.00	154.00	Elaborate design and high unit price Medium head.
ampbellford	22.5	1910	4,000	97.00	71.00	Low head
aley Falls	74	1913-14 and extended 1919.	12,000	127.00	90.00	Turbine rating disproportionate to rated output. Medium head.
aburn	17.5	1911-12	2,000	208.00	146.00	Cost of dam include small capacity, low head, expensive loca conditions.
onelon Falls	22.5	1899	930	244.00	227.00	Small capacity and expensive local con ditions. Low head.

W.J.F.
p.32.

Dealing with the construction of the Ranney's Falls plant, Mr. Francis reports as follows:-

"From a comparison of conditions at the various sites, and making allowance for the difference in head and in the constructional features, and for the dates of construction, it may be stated that the Ranney's Falls plant could have been built at a somewhat small cost per horsepower than was actually the case. The Ranney's

Falls plant has features of design which undoubtedly are more expensive in capital cost than at many of the other plants. The reinforced concrete penstocks, the elaborate reinforced scroll cases for the turbines, and the reinforced concrete draft tubes, together with a number of the electrical features have all been designed and constructed having in mind very high grade construction and high efficiency in operating conditions. The policy of the engineers of the Hydro-Electric Power Commission apparently has been to develop this site for the maximum efficiency in operation and to place in the plant every feature making for absence of operating difficulties and tending to long useful life. W.J.F. p.33 & 34.

The other plants on the system were all designed by a private company, and bear evidence of the fact that the designers had primarily in mind a return on the invested capital in the form of dividends, as well as giving a good service to the customers served.

The above construction policy of the Engineers of the Hydro-Electric Power Commission of Ontario seems also to have been applied in building the transformer stations and high tension transmission lines."

POWER DATA

Trent Section

Details covering development and consumption of power, peak loads, and capital cost per horsepower developed, are given in the report of our Consulting Engineer on pages 34 39 inclusive. The table on page 35 shows that in the year ending 31st October, 1922, 36,400 h.p. was developed, that developed plus purchasable power was 39,400 h.p., and that the horsepower billed was 31,460. When these figures are considered

in conjunction with the fact that the maximum yearly peak was 33,500 h.p., it will be seen that if the demand continues to increase further sources of power must soon be provided.

Our Consulting Engineer makes the following statements in regard to this:

"The market for power has been well covered. The density indicates a high percentage of consumers per capita of population and the use of power per capita compares well with other districts of similar character. The demand for power is apparently still growing rapidly and indications are that further sources of power supply must be provided immediately. The ultimate demand for power and the ultimate source of supply should also be considered because the local economical power sites will soon be all utilized." W.J.F. p.31.

"The situation at present is that there is little or no margin between the power available and the power demand on the System. It is understood that the Hydro-Electric Power Commission has in mind the development of Dam No. 8 and Dam No. 9 at Meyersburg in the near future as a combined development or as two separate plants. If the power demand continues to grow at anything like the recent rate, it is certain that the development of these sites would meet the requirements for a comparatively brief period only and that the power available from these sites would probably be all required within three or four years. The amount of power available

from the development of the other undeveloped sites already mentioned in this report is not very extensive and would probably show high unit costs of development. This brings up the question of the ultimate use of power in the district and of the source of supply for the not distant future. It would appear reasonable that the extensions of the transmission system from Niagara to the eastward of Toronto would eventually prove economical for a number of places, on the System, for example, Oshawa, Whitby, Bowmanville and others. Another possibility for the future power supply for a considerable portion of the district is the projected development of the St. Lawrence River Powers." W.J.P. p.22.

"It is usually sound practice to use available power as close as possible to the generating point, having regard to comparative unit costs of development and the length of transmission lines required from other places. The question is therefore likely to arise in the near future of the policy of conserving all of the power sites on the System for use close to the development and of linking up a portion of the system with transmitted power from Niagara or elsewhere." W.J.P. p.23

Nipissing Section

As stated on page 9 of this report, there is in this section one generating station at Nipissing with a capacity of approximately 2000 H.P., and a stand-by steam plant in North Bay of approximately 625 H.P. W.J.P. N 9

Since the Commission took over the management of this Section in 1916, the growth has been steady, the peak load having increased about 10 per cent. per annum. W.J.F. N.17.

The district served is both urban and rural, but the bulk of the load is in the town of North Bay. The population of North Bay is now said to be between 12,000 and 13,000 while the population of the other municipalities is comparatively small. The total population of the district served is said to be about 15,000.

A table of market statistics showing population, number of consumers, etc., is given on page 16 of our Consulting Engineer's report on this section.

Details covering development and consumption of power, peak loads and capital cost per H.P. developed, are given in the report of our Consulting Engineer on pages 24 to 27 inclusive. The table on page 25 shows that in the year ending 31st October, 1922, 2625 H.P. was developed, and that the H.P. billed was 1496. The development from water power without the steam plant was 2000 H.P. and the maximum yearly peak 1696 H.P. W.J.F. N. 25.

The following are extracts from his report:

"By the contract between the Electric Power Company, Limited, and the town of North Bay, the Company agreed to develop 3,500 horsepower for the use of the town, and to supply all the needs up to this amount during the life of the contract, which was made for ten years from December 15th, 1915. Until

1921 the available capacity including the steam plant was not more than 1,825 horse-power, with considerable periods of low water when the available power was much less. Since 1921 the capacity including the steam plant has been 2,625 horse-power as a maximum. A number of complaints have been made in which it was stated that the service, in North Bay particularly, was not in accordance with the contract, and that there was a considerable shortage of power from time to time. It is apparently the case that in the past two years North Bay could have used more power than was actually available, it being estimated that in 1922 about 400 or 500 horse-power in addition to that available might have been marketed. W.J.F. N.17.

"The use of such a heavy proportion of electric stoves in North Bay has undoubtedly been a large factor in the present state of the service, and the further development of stove loads should be discouraged until a considerable excess of power has been made available by further development. It was hoped that the steam plant formerly operated would not again be called upon, but the engineers of the Hydro-Electric Power Commission state that they are at the present time seriously considering operating the steam plant to meet the demand of the present winter season." W.J.F. N.20.

On pages 11 and 12 of his report on the Nipissing Section, our Consulting Engineer describes the work that the Commission proposes to do in this Section, as provided for in the estimates submitted to the Ontario Legislature on May 25th,

1922, and subsequently authorized in the amount of $350,000.00. Mr. Francis points out that when the changes outlined have been completed, probably in the Autumn of 1923, the Nipissing Section will have two power plants, the total output of which will be approximately 3,700 horsepower under commercial conditions. On pages 12, 13 and 14, Mr. Francis details possible additional power sites. W.J.F. N. 12.

The following are further extracts from his report:

"Summing up the local situation it therefore seems that the development of Bingham, and the re-modelling and extension of the Nipissing plant will provide for normal growth for the next few years, that the Gitzler and Gimball sites are available provided the increase in load is gradual and small, and the costs of development would not prove too high, and that finally there are two sites on the French River of considerable magnitude which may be economically developed provided large blocks of power are available at one time." W.J.F. N.20,21.

"Taking everything into consideration it would appear that with the complete development of the Nipissing plant and the Bingham plant so as to have available from 3,500 horse-power to 4,000 horse-power, the reasonable needs of the Nipissing Section would be served for possibly five years of ordinary growth. Any extraordinary demand such as the establishment of new industries in North Bay, would entirely change the aspect of the future market." W.J.F. N.18.

On pages 18, 19 and 20, Mr. Francis discusses the future market of the district and the possibilities of supplying Sudbury with power from the French River sites.

Mr. Francis in his summary of the salient points of the Economics of the Nipissing Section states:-

"The market conditions in North Bay are peculiar. The steve load is apparently taxing the distribution system and the available power considerably. The density of load indicates a probable normal growth at rates which would require several years to take up the capacity of the remodelled Nipissing plant and the proposed Bingham development. The demand for power is growing, however, and if extraordinary loads are offered, consideration must be given to the development of at least two other power sites on the South River and of the two sites on the French River." W.J.F. N. 50.

GENERAL RELATIONS

In studying the subjects indicated by this heading it is necessary to consider in the first place the following points:

1. The Commission's relation to the Government;
2. Municipal relation to the Government;
3. Relationships within the System.

1. Commission's relation to the Government

This relation is defined in an Order-in-Council dated 5th May, 1916, which grants to the Commission in connection with the Central Ontario System "the control, administration and management of all undertakings, properties, rights, contracts, privileges, franchises and business" which "may be continued and carried on by the said Commission in their own name or in the name of His Majesty, or in the name of any or all of the companies whose businesses have been acquired."

The Order-in-Council also grants the Commission for the purpose of the management, control and administration, "all the rights, powers and privileges of control, administration and management thereof which the Company whose undertakings, property, rights, contracts, licenses, privileges, franchises and businesses is or are vested in the Crown, had at the time of such vesting."

The Commission is instructed by the Order-in-Council to carry on the System "as a separate department or branch of the business of the said Commission."

It is to be noted that the Order-in-Council makes no reference to the carrying on of the System under the provisions of "The Power Commission Act".

2. Municipal relation to the Government

The foregoing extracts from the Order-in-Council show that, although the System was purchased by the Government, there is no direct relation between the municipalities in the System and the Government; because of the fact that the Commission is authorized to carry on the general management of the System and is given practically unlimited powers as far as control, administration and management is concerned.

3. Relationships within the System

As pointed out in the section on "General Economics", consumers of energy are divided into three main groups:-

(a) Private companies taking power at fixed rates; certain municipalities, including Kingston, taking power at fixed rates on wholesale basis.

(b) Nine municipalities buying power at cost on a wholesale basis.

(c) Fifteen municipalities in which power is distributed retail by the Commission.

As given on page 18 of the section entitled "General Economics" contracts under class (a) experienced a loss during the year 1921 of $62,775.62; contracts under class

(b) are on an actual cost basis; contracts under class (c) showed a profit of $84,516.21, consequently it is at once apparent that consumers of power under class (c) are providing in their rates for power an amount to offset the loss experienced on the sale of power under class (a) contracts.

On further analysis it will be observed that those included under class (b) are the only ones on a strict Hydro municipal basis and as disclosed by the figures given in the "General Economics" the sale of power to these constitutes 25% to 30% of the total energy, the revenue return being about 14% of the total.

The condition outlined above is largely accounted for by the fact that the Commission have had to continue contracts with consumers under class (a) and franchises under class (c) which were made by the original owners of the property.

It is further to be noted, as referred to in "General Economics" page 28 that certain municipalities now under class (c) have the right to purchase their local distributing system, without paying therefor any amounts in respect of intangibles, and that other municipalities have also certain rights with respect to the purchase of distributing systems, on the basis of a valuation fixed by arbitration, no reference being made to intangible values.

General

Under the provisions of the Power Commission Act the municipalities within the respective systems have very definite obligations in the form of agreements with the Commission to take power and to pay for same on the cost basis. In the Central Ontario System the acquisition of the properties was not based on any such arrangement and with the exception of those municipalities that had been brought under agreement since the acquisition of the property in 1916 there is no obligation on the part of the other municipalities to pay for power at cost. The agreements under which these ~~latter~~ original municipalities are in contract with the Commission are those which were made with the original owners of the properties.

Mr. Clarkson deals with this subject in a very comprehensive way in his Audit Report for the year ending 31st October, 1921, his statement being as follows:- "In March, 1915, and at dates subsequent to March 1st, 1916 (the date of purchase of the Central Ontario System by the Province of Ontario) the Commission entered into contracts with the City of Peterborough, the Town of Picton, and the Villages of Bloomfield, Lakefield, Havelock, Marmora, Norwood and Wellington, under the terms of which such municipalities undertook to purchase power from the Commission (acting for the Central Ontario System) and to pay cost for the same on the bases laid down in their contracts, requirements of which are similar to those provided under Section 23 of the Power Commission Act. In such contracts it was, amongst

other things, provided that the municipalities should pay sinking funds on the cost of the "works" used in connection with the supply of power to them and that the Commission should hold such "works" as Trustees for the municipalities subject to a lien upon them for "all moneys expended by the Commission under this agreement and not repaid." In all but one or two instances, such contracts were validated by the Legislature. The Town of Whitby has also since 1916 been receiving a supply of power from the Commission on such cost basis but to this date it has executed no contract with the Commission.

The costs payable by such municipalities were not possible of being calculated for reasons hereinafter mentioned in the periods of operation prior to October 31st, 1918. For the periods subsequent to that date, however, such costs were possible of being computed and they were calculated but not given effect to (as is mentioned in my previous report) until within the fiscal year ending October 31st, 1921, when they were made retroactive as from November 1st, 1918. In computing such costs, however, the Sinking Funds required to be paid by the municipalities under the contracts with them were not included in the costs of power to them and to October 31st, 1921, no charge in respect of such Sinking Funds has been made to the municipalities.

With costs for power delivered - excluding sinking funds - charged to the municipalities above mentioned, the System is now being operated upon a footing where -

(1) Power is sold to certain municipalities under contracts with the Commission, which contracts require that the municipalities pay the costs to the Commission of the power delivered to them - including sinking funds, - while the agreements between the municipalities and the Commission also provide that the Commission holds "works" of the System as Trustees for the municipalities subject to a lien "for all moneys expended by the Commission under this agreement and not repaid."

(2) Power is sold by the System to certain municipalities and companies at flat rates per h.p.; the agreements with such municipalities do not provide that they have or shall have any proprietary interest in the System; neither are the municipalities required to pay sinking funds in respect of the "works" of the system.

(3) The Commission, as representing the Province, is operating a number of local utilities which take power from the System and retail it to customers resident in various municipalities.

(4) The Commission, representing the Province, operates the Peterborough Street Railway and the Campbellford Pulp Mill, which take power from the system and pay cost for such power, excluding Sinking Funds.

With such conditions in force it is not impossible or improbable that confusion may come about as to what the exact

rights of the Province or the municipalities mentioned are if Sinking Funds be collected from such municipalities as part of the cost of power delivered to them and they are so permitted to obtain a proprietary interest in the System. Under such circumstances I recommend that the condition of affairs be discussed between the Government and the Commission and some definite basis be arrived at which will determine whether the System is to continue to be owned by the Province or in the alternative it is to pass to the municipalities subject to a lien for repayment of the investments in and advances of the Province to the System. Such an understanding should in my opinion be come to before any Sinking Funds are collected from the municipalities - as part of the cost of power to them - for with acceptance of such Sinking Funds they will obtain an interest in the System which would then be owned jointly by the Province and the municipalities, with doubt obtaining as to whether - so owned - it has to be operated under the provisions of the Power Commission Act or not."

SUMMARY

Running commentary has been introduced into the foregoing recital of facts in order to convey a picture of the whole situation and to direct special attention to the more important features.

There are points, however, of outstanding character, the relative importance of which can be best dealt with in a specific way now that the whole story has been reviewed. The following comments are in the nature of deductions and are submitted as such.

ORIGINAL NEGOTIATIONS

A large number of municipalities in Central Ontario made strong representation to the Government and the Commission looking to the introduction of publicly owned power into their district. It is impossible to say just to what extent their actions were prompted by the knowledge of Hydro activities in Western Ontario, but is undoubtedly true that the desire to have any advantages enjoyed by Western Ontario municipalities was a contributing factor in the matter.

With this condition prevailing, it is regrettable, especially in the light of ensuing results, that the Commission did not follow the prescribed practice of obtaining commitments under the provisions of the Act whereby the municipalities upon the acquisition of the properties would automatically be placed on a Hydro basis. The argument may be advanced that the

some municipalities probably would now refuse to pay up for what they receive

necessary inclusion in the purchase, of properties other than power services, would complicate such an arrangement beyond all practical solution, also that those municipalities, having specially attractive agreements with the Electric Power Company, Limited, would be loath to forego their rights.

If the statements made that the properties were acquired on account of pressure being brought to bear on the Government by the municipalities is true, such arguments are discountable at once. The Government and the Commission should have made every endeavour to ascertain the exact condition of the Electric Power Company, Limited, and with this information a complete report should have been submitted to the municipalities, thus giving them the fullest opportunity to view every aspect of the situation. Had the municipalities then ceased to urge their being brought in on a Hydro municipal basis it would have left the situation no worse than before and the Government would have had the advantage of a definite expression of opinion from the district. On the other hand, if the municipalities had continued to press their original proposals, the Government's position would have been materially strengthened in taking the stand that the whole district should be brought under the provisions of the Power Commission Act, and that the losses experienced from the operation of unproductive properties would have to be borne by the individual municipalities which they served, or by the undertaking as a whole.

It is clearly established that the Government was relying on the Commission for guidance and advice on matters relating to the purchase of the properties. It is further established that Government intervention in the matter was brought about by the failure of the Commission and the Company to come to any mutually satisfactory arrangement. Negotiating relations between the Commission and the Company finally broke down on account of the stand taken by members of the Government and the Chairman of the Commission that they had no enabling legislation and were not empowered by the municipalities concerned to accept a valuation made by Sir Henry Drayton as binding upon both parties. The attitude taken in this respect is of extreme interest, having regard to the fact that while enabling legislation was passed validating the purchase of the properties, the municipalities concerned did not undertake to place themselves on the same basis as other Hydro systems.

Thus in the most initial stages of the proceedings little or no attention was given to the application of those principles which would bring this district under the usual conditions applying to other Hydro systems.

By this action the Province entered into a business which had previously been in the hands of private enterprise, or the Commission. Having entered this field the Province in effect

created an additional Hydro policy, the one being administered directly by the Commission in accordance with the Power Commission Act, whereby the liability of the Province for expenditures incurred is guaranteed by the municipalities served, the other being a direct liability of the Province not guaranteed in any way by the municipalities.

PURCHASE PRICE

The Government purchased only the assets and franchise rights of the Electric Power Company, Limited, and it was not obligatory on the part of the Company to submit to the Commission or the Government operating or capital account statements. They did, however, of their own volition, in connection with the appraisal made by the Commission's engineers in 1914, submit to the Commission certain information relative to their financial condition for the years 1912 to 1914, an analysis of which shows that the bonds and preferred stock issued amounted to a total of $8,808,100.00. The information also shows that during the year 1914 the net profits of the Electric Power Company, Limited, was insufficient to meet interest charges for that year in the amount of approximately $73,000.00, and we understand no amount for depreciation was provided during that period. File 218A p.3&4

In the valuation made by the Commission following the acquisition of the properties, the replacement value without intangibles was placed on the books of the Commission at

$5,672,658.00 and the difference between the replacement value and the price paid, being $2,677,342.00, was placed on the books as intangibles, thus the price paid was about 50% in excess of the replacement value of the properties. The value of the intangibles is very doubtful, but it can hardly be said that it would represent goodwill in as much as the Company had failed to meet its bond interest shortly prior to its acquisition by the Government and consequently the undertaking could hardly be characterized as a going concern. G.R. p.14

It is obviously true that the Company did not have to accept a price equal to the valuation made by the Commission, but it is also equally true that, if in the opinion of the Commission the price asked was exorbitant, there was no obligation on their part to recommend the purchase at a price so much in excess of their valuation. The action taken, however, was that the Chairman, acting for the Commission advised the Government to pay $8,350,000.00 of 4% fifty-year debentures. The wording of his letter was unfortunate in its reference to properties in the Trent District and would give a resourceful negotiator good opportunity for insisting on an additional amount on account of the inclusion of the properties in the Nipissing Section. Mr. McGarry, the then Treasurer, takes a different view of the matter, however, stating that the final change from fifty-year debentures to debentures maturing in ten years was made at his instigation since he believed that

the whole project should be refinanced in 1926 with a new debenture flotation with interest rate less than 4%. It may be that Mr. McGarry took this view when the change was under consideration but the weight of evidence points to the fact that the life of the debentures was reduced from fifty to ten years in order that the Nipissing Section might be included and the our auditors give it as their opinion that this represented a cash increase in the price of approximately $880,000.00, this calculation being based on the assumption that debentures of like nature would yield 5%. It is to be noted that capital assets of the Nipissing Section, including intangibles, were valued in 1916 at $506,827.00. Consequently it would appear that $373,000.00in excess of the value of the Nipissing properties was given by reducing the life of the debentures.

E. 1450

E. 1506

DIVERSION OF APPROPRIATIONS

As disclosed by the auditors' statements, $1,719,000.00 specifically voted on the recommendation of the Commission by the Government for expenditure on the Central Ontario System were applied by the Commission to the payment of obligations in other Systems.

Trustee
Manager

It is true that the monies were duly accounted for and all interest charges properly allocated, but if practices such as this were continued in Governmental or private enterprises, the resulting conditions would be chaotic.

Not only was the action wrong in principle, but the Commission in so doing utterly disregarded the instructions given them for the management of the properties in the Order-in-Council which provided that "the Commission do carry on the same as a separate department or branch of the business of the said Commission". Having regard to the fact that the diversion of monies was made in four successive years, aggregating the total of $1,719,000.00, it would appear that the Commission in applying to the Government for monies in respect of the Central Ontario System repeatedly requested amounts which were largely in excess of those required to cover their actual expenditures.

RESERVE ACCOUNTS

Under the Section dealing with "General Economics", the exact condition in reference to reserve accounts has been set out.

Insofar as reserve for renewals is concerned, it has been pointed out that the Engineers of the Commission consider that their rates in respect to this have been too high in the past. It is recommended that no change be made by the Commission in respect to the amount to be set aside for reserve for renewals until such time as a complete review has been made of the method of establishing the amounts of such funds and the advisability of reinvesting same in works as has already been done.

With respect to contingency reserves, it is quite clear that the amounts set aside in this respect are likely to be wholly inadequate to meet any major expenditures that may be

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occasioned by catastrophe. At the same time, it is pointed out that any increase in the amounts to be set aside in this respect will necessitate a proportionate increase in the rates for power, or failing this, the yearly deficit on the System will have to be increased by the same amount. To be on a safe basis, the reserve for contingencies should be built up to fifty or seventy-five thousand dollars as recommended by our Consulting Engineer.

CONSTRUCTION POLICY

In the review of the construction policy of the Commission in the development at Ranney Falls, the opinion of our Consulting Engineer, Mr. Francis, has been quoted. It is not considered advisable at this time to make any definite recommendation in respect to the construction policy of the Commission having regard to the fact that this is a broad issue affecting all the construction work carried out by the Commission and one which should be reported upon in more detail after other works constructed by the Commission have been investigated.

GROWTH OF MARKET

As pointed out by our Consulting Engineer practically all power possible of development at the present time in the Trent District is required to meet the peak load demands. In the Nipissing Section, it is established that the amount of

power at present developed will not meet the demand. This is supported by the report made by our Consulting Engineer.

It is very apparent that the Government, if it is to meet the ever-increasing demand for power, will have to authorize further expenditures for new developments. The time and the nature of our investigations have not permitted of a full and comprehensive survey of the situation in this respect, but great care should be exercised in investigating this whole question before any definite policy of extension is decided upon.

With respect to the Nipissing Section, as pointed out by our Consulting Engineer, there are one or two places which, if developed, might meet the normal increase in the demand for power for a few years, but if there were any abnormal increase in the load these developments would be wholly inadequate. Representatives from North Bay, which consumes the majority of the power generated in this Section, made strong representation that Government action should be taken looking to the development of power sites on the French River, which would ensure a large supply of power to fully meet the demand that may be imposed on the System. It is pointed out that any developments that might be made on the French River will have to be carried out in conjunction with the Georgian Bay Canal scheme in co-operation with the Federal Government. Investigation into the details of such a scheme would appear to be outside the reference of this Commission, but it is felt that the Government, before authorizing further expenditures

in respect of developments now being contemplated by the Commission, should go carefully into the French River Scheme.

Dealing particularly with the Trent District of the System, as pointed out by our Consulting Engineer, there are only two places remaining in the Trent River District which, on development, would yield substantial amounts of power. The other undeveloped sites are of small capacity and the economy of their development is questionable. By developing the two sites referred to above, the needs of the System, under normal increase, might be taken care of for a few years, but it is quite apparent that, if an abnormal increase takes place in the near future and in any event after the lapse of a few years, power from other sources will have to be introduced into the System, in order to properly cope with the demand. Mr. Francis, our Consulting Engineer, without having made a detailed study of the situation, gives it as his opinion that it may be more economical to confine the sale of power from developments in the Trent District to those municipalities and users of power in the immediate vicinity of the developments and to introduce power from other sources such as the Niagara System into those municipalities which are more remote from the developments on the Trent River.

In view of the necessity that will arise to provide more power for the district, it would be advisable that the Commission be instructed to make a comprehensive survey of the

all Niagara power developed & undeveloped will be included in Niagara District.

whole situation and report to the Government in respect to the future power requirements of the district. It is possible that extra power for this system may be obtained from the Niagara System, but in this event considerable complications would arise as the frequency of the Niagara power is 25 cycles, and that of the Central Ontario System 60 cycles. The introduction of the Niagara power would therefore necessitate a change in the equipment used by some of the consumers, or the installation of frequency convertors, in either case a considerable change and expenditure would be necessary.

On the other hand, the development of the power on the St. Lawrence River may be undertaken and this would provide another source from which the Central Ontario System could be supplied.

As referred to in the consideration of power shortage in the Nipissing Section, the development on the French River would supply large blocks of power. Investigations should be made by the Commission looking to the economic possibility of introducing power from this district to supplement power developed in the Trent District. Both the Trent District and the Nipissing Section are on sixty cycles and the paralleling of these two sections would thus be a very simple matter.

DISPOSITION OF INDUSTRIES AND UTILITIES

The operation of the properties acquired was, by Order-in-Council, placed in the hands of the Commission. The

wording of the Order-in-Council does not clearly define the exact procedure that shall be followed by the Commission, acting as managers for the Province, but it may be inferentially concluded that it was the Government's intention that the Commission should operate the system, in so far as conditions would permit, in a manner similar to those systems operated under the provisions of the Power Commission Act. This view is definitely supported by the evidence given by members of the Government. It was therefore the intention that the properties should be so administered as to bring them into general conformity with other Hydro systems, and relieve the Government as quickly as possible of its obligation in respect of the purchase and operation.

The purchase, not having placed the municipalities under any obligation in addition to their current agreements with the original owners of the properties, made the task of bringing the whole undertaking into line with other Hydro systems full of real complications.

In addition to the electrical services the Commission was faced with the necessity of operating many other unproductive enterprises. It was obviously the intention of the Government that these should be disposed of as quickly as possible. To this end the Commission sold the flour mill, sold the municipal water works to Trenton at a loss of $2,270.64, and closed down the gas works at Napanee which was valued on the books of the Commission at September 30th, 1922, at $43,635.67.

PULP MILL

The operation of the pulp mill had an accumulated deficit at the end of the fiscal year 1919 of $59,197.12 which was entirely wiped out by large profits during the year 1920 amounting to $189,869.25. During the year 1922 a very substantial loss was experienced with the result that the accumulated profits of the previous two years have been greatly reduced. It is understood that an offer was just recently made for the purchase of this property, and it is submitted that such offer should be accepted if it is at all reasonable. As a matter of policy there can be no wisdom in the operation of an industry of this kind by a Commission especially appointed to deal with the production and sale of power.

GAS WORKS AND WATER WORKS

The operations of the Gas Works have been showing steady improvement during recent years. The improvement as already pointed out is largely due to increases in rates to consumers, which are now approximately 100% higher than when the properties were taken over. It is doubtful if the rates can be further increased to improve conditions, but the number of consumers is increasing and it is quite possible that the works may soon be on a firm operating basis. There is little likelihood however, of the accumulated loss of $108,430.62 ever being overcome out of earnings.

The condition of the water works is relatively better than that of the gas works. The operation, resulting in a profit for the year 1922 of $773.55. If an increase in the rates is possible the accumulated deficit of $27,010.14 may be overcome within a reasonable period.

With respect to the two utilities referred to above, it is quite apparent that they should not form part of the ~~essential~~ Central Ontario system, but should be turned over as quickly as possible to the municipalities which they serve. It is therefore desirable that the Commission bring the properties to the best operating condition possible, and then take steps to dispose of them to the municipalities.

PETERBOROUGH RADIAL RAILWAY

The deficits on the operation of the Peterborough Radial Railway have been steadily increasing, and the deficit for the year ending October 31st, 1922, amounting to $34,218.20 brings the accumulated deficit to $130,450.52. As pointed out by our Consulting Engineer the introduction of one-man cars, together with the reduction in wages and increased traffic, if Peterborough grows industrially, may put the undertaking on a more favourable basis. The introduction of one-man cars will necessitate a very considerable expenditure, and the economics of the proposal should be studied closely before any increase is made in the capital investment. It is very doubtful if the undertaking can ever meet its yearly charges, out

of revenue and it is obviously impossible for it ever to overcome the accumulated deficit.

The Railway serves only Peterborough, and has no connection with other undertakings within the system. On this basis there can be no wisdom in continuing its operation under the ownership of the Government, and continuing to meet its operating losses from revenues derived from the sale of power to the whole system. Every endeavour should be made to place the Railway in the best operating condition possible, and steps should then be taken to turn it over to the City of Peterborough.

As will be noted from the operating statements of the Peterborough Radial Railway, the gas works, and the water works, the total accumulated deficit up to October 31st, 1922, was $265,881.38. This to some extent has been offset by profits from other departments. A proportion of the loss still exists and is included in the accumulated deficit on the whole system. The Province to date has not been called upon to meet deficits, they having been provided out of reserve funds, which in fact means that the reserve funds shown previously in the amount of approximately $1,381,000.00 at October 31st, 1922, have been reduced by the amount of the deficit. Thus in fact, the actual reserves available in liquid form, or as reinvested capital amounts to approximately $1,143,833.00

The sale of the utilities to the municipalities will in all probability result in a loss, which should be charged

into the intangible account, as has already been done in the case of losses sustained up to October 31st, 1921, in the amount of $171,595.15 through the sale and scrapping of other works of the system. In respect to the accumulated deficits on the gas works, water works and railway, it is very doubtful if any practical means can be found to recoup the system in this respect, but in view of the fact that by the sale of the properties operating deficits in the future will be eliminated, it would appear wise that they be left on the books as at present. There is, however, the possibility that these accumulated deficits may be overcome by the future profits of the remaining departments.

DISPOSAL OF LOCAL DISTRIBUTING SYSTEMS

Should those two groups of municipalities which, as already pointed out, have certain rights with respect to the purchase of their local distribution systems, exercise such rights and should the purchase by them result in a loss, the loss could be taken care of by increasing the intangibles on the whole system by this amount. In the alternative the loss occasioned by each individual municipality could be placed in separate intangible accounts and a set rate provided in the cost of power to each municipality to amortize the loss in a convenient period.

OWNERSHIP OF PROPERTIES

At the request of the Midland Municipal Association, a public hearing was held in Toronto on October 17th 1922 to hear representations from various municipalities.

Mr. T. H. Stinson of Lindsay, Ontario, representing the Association, stated that a resolution had been passed at a meeting held in Port Hope on the third day of October, 1922, at which seventeen (17) municipalities had been represented. The resolution was supported by fifteen (15) municipalities and read as follows:-

"Moved by Mayor Mark of Cobourg, SECONDED BY Mayor O'Reilly of Lindsay,

WHEREAS the Government of Ontario purchased the powers and property of the Electric Power Company and subsidiary companies in Central Ontario;

AND WHEREAS the property included street railway and other local utilities;

AND WHEREAS these properties are owned by the Province and are operated by the Hydro-Electric Power Commission of Ontario;

AND WHEREAS in Western Ontario the Hydro-Electric Power Commission has constructed, controls and operates the power properties for the municipalities and the properties are in fact owned by the municipalities;

AND WHEREAS the municipalities in Central Ontario desire to have the powers and properties in this district placed in the same position as those in Western Ontario and believe that only by this being done can the municipalities and people be justly treated;

AND WHEREAS these properties and utilities should be handed over to the Hydro-Electric Commission to be operated for the municipalities, and at a price that will make the Hydro-Electric business in Central Ontario commercially feasible and permit the local utilities to be sold direct to the municipalities at a price that will enable the municipalities to operate them on a sound commercial basis;

RESOLVED, that this meeting, representing the municipalities in the Central Ontario district, petition and urge the Government of Ontario to pass legislation for the transfer of the powers and utilities in this district owned by the Province to the Hydro-Electric Power Commission for the municipalities voting in favour of the same, in such a way that they will be the property of the said municipalities and be operated by the Hydro Electric Power Commission for the said municipalities as is the case in Western Ontario, and that they will be so transferred at a price and on terms that will enable the powers and utilities to be operated on a sound and satisfactory financial and commercial basis, and the local utilities to be taken over by the several municipalities at a price that will enable them to operate those utilities at fair charges for services and without danger of financial loss.

The said legislation to provide for a vote to be taken

thereon by the municipalities after the terms and conditions for the transfer have been agreed upon between the Government and the Hydro Commission acting for the municipalities."

During the hearing it became quite apparent that there was a great deal of uncertainty existing in the minds of the representatives as to the basis on which the properties should be taken over by the municipalities. It is quite reasonable to suppose that this uncertainty should exist in as much as the annual report published by the Commission does not set out in detail the exact condition of the various departments constituting the whole system.

To sum up briefly the representations made by the Association, it is sufficient to say that the representatives stated that if it would be to the advantage of the municipalities concerned to take over the properties and operate them on a Hydro municipal basis then the resolution as before quoted would stand, but if it became apparent that the interests of the municipalities were best served by leaving the ownership of the properties vested in the Province, they saw no reason why they should assume any responsibility in the matter. They further stated that their appearance at the public hearing was for the purpose of gaining a more exact knowledge of the situation so that they could consider the matter further in the light of the information obtained. At a later date, when a public hearing was held for the purpose of

taking evidence from the Commission in respect to the economics of the System, representatives from the Association again attended for the purpose of obtaining further information. Since that time, no further communications have been received from them, and it would appear that it is for the Government to take any further steps it may deem advisable in respect to obtaining evidence as to the public sentiment in the Central Ontario System.

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Speaking generally some municipalities and private companies have been receiving their power at less than cost; others are paying an excess amount to offset this and in addition are providing to some extent revenue to meet the deficits on the unproductive industries and local utilities and the deficits on losing contracts existing with private companies; even under these conditions, the system as a whole shows a loss which is charged against the system.

The broad question is the relation that the Central Ontario System bears to other Hydro systems in the Province of Ontario, and its eventual ownership. The Commission under the provisions of the Power Commission Act is first and foremost a trustee for the municipalities; at the same time it is responsible to the Government. In the case of the Central Ontario System the Commission is acting in a managerial capacity for the Government only.

This is correct, therefore it is a direct violation of the Act, from start to finish - or rather to it - or rather

As pointed out, the Government and the Commission failed to obtain these conditions prior to the purchase which would ensure the placing of the System on a Hydro municipal basis; the evidence shows, however, that members of the Government had this in mind and maintained their position in this respect after the purchase had been concluded.

As the purchase was made without any commitment having been obtained from the municipalities, the task of making the desires of the Government effective was a very difficult one.

It would appear that the Chairman of the Commission in recommending that sinking fund payments be deferred for ten years had in mind that within that period of time he would be able to bring the system on to a Hydro municipal basis; his recommendation in this regard may also have been founded to some extent on the uncertainty as to whether the operating condition of the system would permit of the payment of sinking funds to amortize the debentures issued in respect of purchase.

Any anticipation that the system could be placed on a Hydro municipal basis within the period of ten years, seems unlikely of realisation in as much as after nearly seven years of operation, with the exception of newly incoming municipalities the system remains practically unchanged in this respect. The Commission has placed the newly incoming municipalities on a standard Hydro municipal basis which

provides that they will be liable for the payment of sinking funds. As pointed out these sinking funds have never been collected, but if they were the agreement provides that they automatically acquire a proprietary right in the works of the System.

None of the other municipalities being on any such basis, the agreements with the new municipalities really create further complications. Mr. Clarkson points out these complications very clearly in his audit report which has already been quoted on page 48 of this report.

It is very apparent from a review of Mr. Clarkson's statement that if the system is to be placed on a Hydro municipal basis at an early date, a re-arrangement of the whole undertaking must be made. Failing this and any voluntary action on the part of the municipalities, it would appear that the Commission will have to continue to operate the system as at present until the agreements at present in force ~~elapse~~ expire. During such period, the Commission will continue to be responsible for the whole undertaking and in effect there will be two Hydro policies in operation within the Province.

In the alternative, if the Government decide as a matter of policy to continue the ownership and operation of the system as at present, a decision will have to be reached, when the present debenture issue matures in 1926

whether or not sinking funds are to be set up in respect of the new issue to recoup the Government.

In the event of the Government deciding to continue the ownership of the properties and if no amounts are charged in the rates of power to cover sinking fund it is arguable that such action in effect sets up a discrimination against municipalities that are on a standard Hydro municipal basis. By the payment of sinking fund municipalities acquire a growing equity from year to year in all works, resulting at the end of a definite period in complete ownership. Inasmuch as extensions to works are constantly necessary in order to keep pace with growing requirements, it would appear that the payment of sinking funds will continue for an indefinite period.

A more practicable basis of measuring comparative advantages is by the comparison of the actual rates paid for power. If the amount charged in respect of sinking fund amounts to, say, 10% of the cost of power, then to this extent the sinking fund is the measure of the amount paid by the municipality for an equity, the value of which is very uncertain.

The Central Ontario System is not providing an item in the cost of power to cover payment of sinking fund, and, of course, no proprietary interest is being acquired. It is, however, enjoying all benefits of an undertaking which is a liability on the Province as a whole, and in addition the cost of power on the system is lessened to the extent of the sinking fund not charged.

Continue 3 gas plants but sell to municipal on It. basis
" 2 water works

Loss on Peterboro Radial $130 [illegible] 12/31/22 } P. 23-24
offer to sell to Peterboro & if refused shut down
Cb capital invest. about $375,000.

Complete Pulp Mill & timber limits sell in next favorable market

Mfg. Systems - sell to North Bay on It. basis; meanwhile } P. 28
raise rates to break even (providing for steam plant contingency

Reserves For Contingency on with Elect & Mfg. System
should be built up. now too low

Tax should be put on a sinking fund to retire bonds [illegible]

Diversion of C.O. System funds to other systems. Wrong & [illegible]

Where it built either generating plants or lines, work done to get max. [illegible]
efficiency. Where private capital built out were for map reasons [illegible]

Power Limitations re Supply & Demand See P. 40

Re Mfg. System. It contracted to give 3500 HP. 18 [illegible] last [illegible] 14
In 15 municipalities it sells @ [illegible] (c). Finally [illegible] municipal
buying wholesale & [illegible] rate [illegible] (a); [illegible] P. 40 & P. 41

Clarkson's opinion that no sinking fund should be collected until it
is determining where the final ownership will lie in C.O.S. P. 51

~~Sinking fund~~

PLAN - C.O.S. & Mfg. System - RE FINAL OWNERSHIP

I Sell off now

(a) 3 gas [illegible]
(b) 2 water [illegible]
(c) 1 [illegible] @ Peterboro
(d) 1 Pulp Mill & timber limits

II Sell to other municipalities as soon as possible
(15 municipalities [illegible] + [illegible])

(a) (b) (c) P. 46

1. Government must sell on [illegible] basis
from operating standpoint of municipalities
2. All features of [illegible] steam H.E.P.C. [illegible]
to apply after the future

N.B. - CRITICISM.

(a) Of [illegible] in purchasing C.O.S. before
clearing final ownership on municipalities

(b) Consideration of It. for [illegible] relationship
[illegible] and lines to get maximum efficiency instead
than the viewpoint of the private [illegible]
of building for a return on capital

Our report

I Introduction :-
Historical briefly

II Economic situation (as brief as possible)

III Our (conclusions)